

NJ-iot402WE

Remote Terminal Unit (RTU)



Version Revision

The revision log accumulates notes for each document update

Number	Document Version	Revisionist	Release Date	Modification instructions
1	V1.0.0	Lu Tingzhen	2021.02.15	Changing the picture

Xiamen Nengjia New Energy Technology Co.

www.xmnengjia.com

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I .Product Introduction

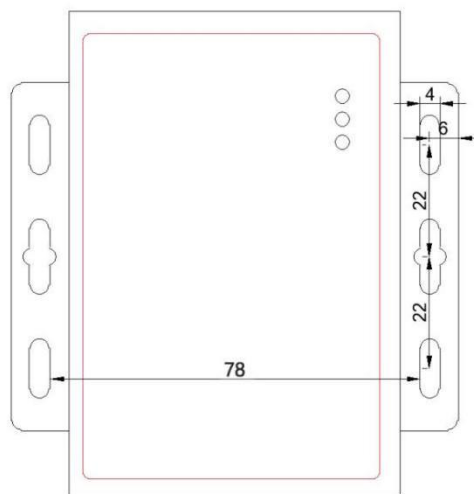
NJ-iot402WE is an industrial-grade small-size data transmission terminal (RTU, Remote Terminal Unit) equipped with a high-performance industrial-grade wireless module. It supports multi-mode communication including 4G/WiFi/Ethernet and realizes serial-to-network data transmission. Designed specifically for harsh unattended environments, it features high reliability and security, suitable for smart charging piles, smart environmental protection, smart grid, industrial automation and other fields.

- Wide Voltage Input: Adaptable to 8-45V input, supporting three voltage types (12V/24V/48V) with a wide voltage range of 9-80V DC.
- Multi-mode Communication: Supports 4G Cat.1, WiFi, and Ethernet to adapt to complex network environments.
- Protocol Compatibility: Compatible with standard IoT protocols such as TCP/UDP/MQTT/HTTP.
- Communication & Digital I/O Interfaces: Equipped with 2 groups of RS485, 1 group of RS232 communication interfaces, 2 channels of 3.3V digital input (DI) and 2 channels of 3.3V digital output (DO).
- Data Security: Supports TLS/SSL symmetric and asymmetric encryption to eliminate plaintext transmission risks and prevent data eavesdropping and tampering.
- Identity Authentication: Features SIM/USIM card slot design to ensure secure communication identity authentication.
- Interface Protection: RS232/485 interfaces have built-in 15KV ESD protection; power interface is equipped with reverse polarity protection and overvoltage protection.
- Electrical Isolation: Adopts RS485 electrical isolation technology to ensure stable operation of the device and reliable data transmission.
- Multi-platform Access: Supports active-standby dual data centers and can connect to up to 5 data centers simultaneously (such as Alibaba Cloud, Huawei Cloud, Baidu TianGong, China Mobile OneNET, etc.).
- Third-party Compatibility: Compatible with third-party platforms supporting MQTT protocol, with strong scalability.
- Harsh Environment Adaptation: Designed with wide temperature and wide voltage, suitable for operating environments of -40℃~85℃.

II. Product diagram and dimensions



RTU - Remote Terminal Unit



Length * Width * Height = 69mm * 96mm * 25mm

(*The above dimensions are manually measured with the product laid flat. There may be an error of 1-2mm due to different measurement methods, and the actual product received shall prevail.)

III. Application Scenarios

- Smart Energy: Remote monitoring of smart charging piles and smart grids.
- Environmental Protection Monitoring: Sewage discharge monitoring and air quality data collection.
- Industrial Automation: PLC device networking and remote transmission of production line status.
- Public Security: Monitoring of fire-fighting facilities and data transmission of emergency equipment.
- Intelligent Transportation: Traffic signal control and roadside equipment management.

IV. Technical Parameters

Parameter Name	Specification
Communication Module	4G Cat.1 module, supporting FDD-LTE/TDD-LTE/WCDMA/GSM standards; WiFi 802.11 b/g/n; Ethernet 10/100Mbps
Interface Configuration	1 group of RS232, 2 groups of RS485, 2 universal inputs (3.3V) for position detection (DI), 2 universal outputs (3.3V) for relay control (DO)
Transmission Protocol	TCP/UDP/MQTT/HTTP/HTTPS, supporting TLS 1.2/1.3 encryption
Protection Level	RS485 15KV ESD protection; power reverse polarity/overvoltage protection; IP30 shell protection
Operating Environment	Temperature: -40℃~85℃, Humidity: 5%~95% (non-condensing)
Power Consumption	Standby power consumption ≤ 0.5W, Working power consumption ≤ 3W
Adaptable Voltage	12V/24V/48V three voltage inputs, 9-80V wide voltage input

V. Product Technical Support



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